Operating Manual
Joystick
CHALLENGER Ji

List of Contents

List of Contents 2
Introduction 2
Available Challenger Ji models 2
Assembly 3
Pin Connections 3
Technical Data 4
Safety Instructions 5
General Instructions 6

Introduction

The Challenger Joystick (Ji) is an intrinsically safe joystick for the application in zone 0 / zone 22.

The joystick functions electrically contact-less which ensures an almost maintenance and wear-free operation. The applied sensor technology results in a virtually infinitesimal resolution.

Additional to the buttons in the front plate a button can be integrated into the joystick (e.g. Ji-SW). This button have the same function like the left mouse button.

It serves to control an ASD (Application Supporting Device) e.g. a PC terminal and it has been designed for the application in an explosion-endangered area.

For the installation in Challenger components the Challenger FMO (display) must feature the option "2.PD".

It is equipped with a PS/2 data interface for connection to an intrinsically safe data interface.

CHALLENGER Ji is a Microsoft™-compatible joystick and it is also compatible with the standard Microsoft™ mouse driver.

Available Challenger Ji models

Various models of Challenger Ji can be supplied:

Ji	Joystick
Ji-B6	Joystick with barrier for max. 6.25V
Ji-B12	Joystick with barrier for max. 12.5V
Ji SW	Joystick with Switch
Ji-B6 SW	Joystick with barrier for max. 6.25V with Switch
Ji-B12 SW	Joystick with barrier for max. 12.5V with Switch

Assembly

To ensure the international protection IP66 (NEMA 4X) the joystick module has to be installed in a housing min. certified according to IP65 (with a cut-out of 153mm x 84mm and/or 6" x 3.3").

The joystick module is inserted into the housing cut-out with its front side to the exterior and fastened from the inside via a minimum of four mounting clips which are evenly distributed over the external circumference of the joystick housing in such a way that the module is tight fitting.

The electrical connection can be seen in the wiring diagram #10100470 and the license.

Pin Connections

Connection	Significance
K44-1 and/or brown and/or 1	Supply circuit +UB
K44-2 and/or white and/or 2	Supply / Data circuit GND
K44-3 and/or yellow and/or 3	Data
K44-4 and/or green and/or 4	Clock

Please find the pin numbering in the pin identification plate which is attached near the pin.

Details can be found in the wiring diagram #10100470 and the license.

Technical Data

	Zone 0	Zone 1	Zone 22
International ignition protection:	II 1 G EEx ia IIB T4 Ex ia IIB T4	II 2 G EEx ia IIC T4 Ex ia IIC T4	II 3 D T60°C IP6X Ex T60°C IP6X
Operating temperature: (10 to 90% rel. humidity, n. c.)	Ta: -20°C ... +60°C (-4°F to 140°F)	Ta: -40°C ... +70°C (-40°F to 158°F)	Ta: -25°C ... +60°C (-13°F to 140°F)
License:	TÜV 04 ATEX 2459	TÜV 04 ATEX 2459	TÜV 04 ATEX 2647X

Housing material: Sheet steel / aluminum

Housing dimensions: see drawings

International Protection Encl.: Front side IP66 (NEMA 4X9 with expert installation.

Connection supply: Pin K44 2 x (0.5-2.5)mm² rigid / flexible
or connecting line

Connection interface: Pin K44 2 x (0.5-2.5)mm² rigid / flexible
or connecting line

Storage temperature: -20 °C - +60°C (-4°F to 140°F), 10 to 90% rel. humidity, n. cond.

Type Ji:

Supply voltage: Via intrinsically safe supply unit with the technical data:
$U_{max} \leq 5.5$ V, $I_{min} > 14$ mA
C_{imax} 19uF, L_i negligible

Type Ji-B6:

Supply voltage: Via intrinsically safe supply unit with the technical data:
$U_{max} \leq 6.25$ V, $I_{min} > 14$ mA
C_i, L_i negligible

Type Ji-B12:

Supply voltage: Via intrinsically safe supply unit with the technical data:
$U_{max} \leq 12.5$ V, $I_{min} > 14$ mA
C_i, L_i negligible

Technical Data Data circuit all Ji types: Via intrinsically safe interface with the technical data:
$Ui_{max} \leq 5.5$ V
$U_o \leq 5.5$V, $I_o \leq 142$mA, $P_o \leq 105$mW
C_i, L_i negligible

Material joystick gaiter-protector: Neoprene

Max. admissible load: 300N

Further details can be found in the license.

Safety Instructions

General Safety Instructions

The instructions stated in this chapter are to be followed accurately to ensure a safe and reliable operation.

The license and the special conditions included in it are to be observed.

Follow the national safety regulations and the accident prevention regulations.

The installation is only to be performed by specialists. These specialist must be familiar with the characteristics of explosion-endangered facilities.

Incorrect or inadmissible application as well as non-observance of the instructions of this operating manual make the guarantee void.

Only use this device for the approved purpose.

Conversions and modifications to the device are inadmissible.

The housing is only to be opened by the company Gecma Components GmbH.

Assembly

The national assembly and installation regulations are to be observed.

The generally accepted rules of engineering are to be observed.

The entire equipment is to be connected and operated correctly and properly according to the applicable standards, guidelines and installation instructions.

The housing is to be grounded via grounding equipment. Grounding must be effected with a core cross section of at least $4mm^2$.

The device is only to be connected in a de-energized condition.

The intrinsically safe line system with supply and signal lines has to be effected in such a way that no error must be considered between the individual circuits, see IEC 600-79-14, 12.2.2.8.

If a joystick for use in a dust atmosphere is to be replaced, the device and/or the housing, in which the joystick is installed, is to be de-energized first and if necessary cooled according to the regulations. Before opening the device and/or housing and during period in which the device and/or the housing is open, the environment of the device and/or housing has to be kept dust-free to such an extent that no dust can enter the interior of the housing. When installing new components observe that all seals are in a flawless condition and function properly.

Before putting the device into operation make sure that the device has been installed as prescribed and that the device and its wiring are not damaged.

If the power supply of the device is not intrinsically safe, the license will become void and it must not be operated as an intrinsically safe device. If the device was operated intrinsically safely with a low level of international protection (e.g. ib), it must not be operated afterwards in applications for a higher level of international protection (e.g. ia).

Operation

The device is only to be operated in an undamaged and clean condition.

If the device has suffered any damages which might affect the international protection (e.g. cracks, holes or broken components) it must be taken out of service immediately. The device can only be put into operation again after the defect components have been exchanged.

When the joystick is damaged, do not touch it any longer! Risk of injury!

If the device is to be used in a dust atmosphere dust layers >5mm have to be removed.

In the event of non-observance & non-compliance the stipulated explosion protection cannot be guaranteed and/or the guarantee will become void!

Modifications require the written approval by the company GeCma Components GmbH.

General Instructions

Before starting the assembly read the entire operating manual!

In cases of doubt (in the form of mistranslation) the German operating manual is to be applied. We do not assume liability for misprints and errors in this operating manual.

Should you have any questions or suggestions please feel free to contact us any time:

GeCma Components GmbH
Heisenbergstraße 26 – 40
D-50169 Kerpen

Tel.: +49 (0)22 37 / 69 96 0
Fax: +49 (0)22 37 / 69 96 99
mailto:info@gecma.com
http://www.gecma.com

Technical progress

The manufacturer reserves the right to adjust all technical data without special announcement according to the technical progress.

Repair work, hazardous material

The description of the respective fault(s) is in any case to be included with the devices which are sent to GeCma Components GmbH for repair.

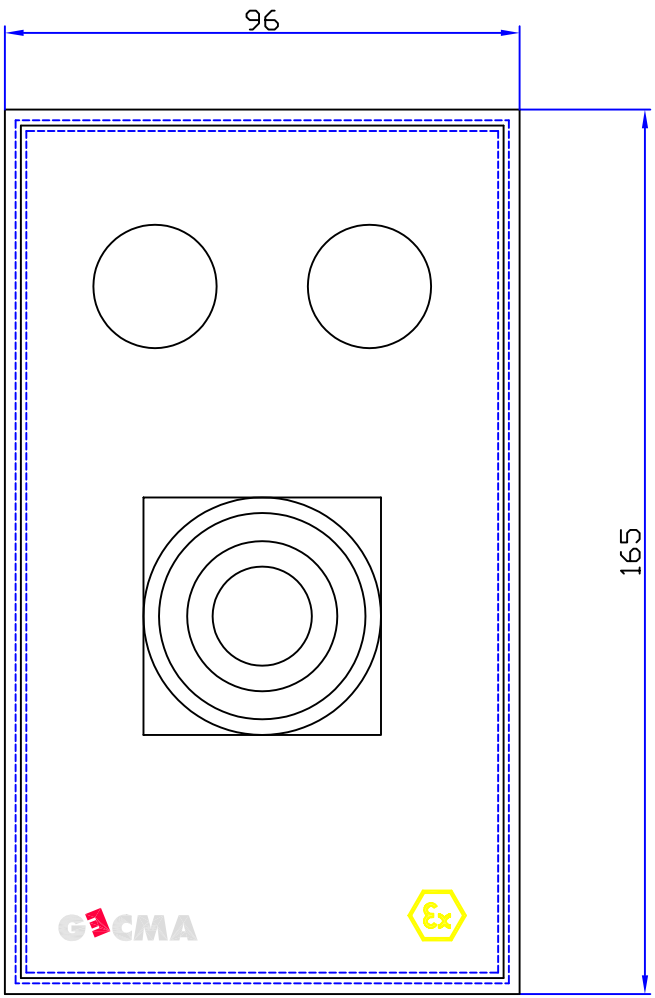
The following measures are to be taken before sending a device in for repair:

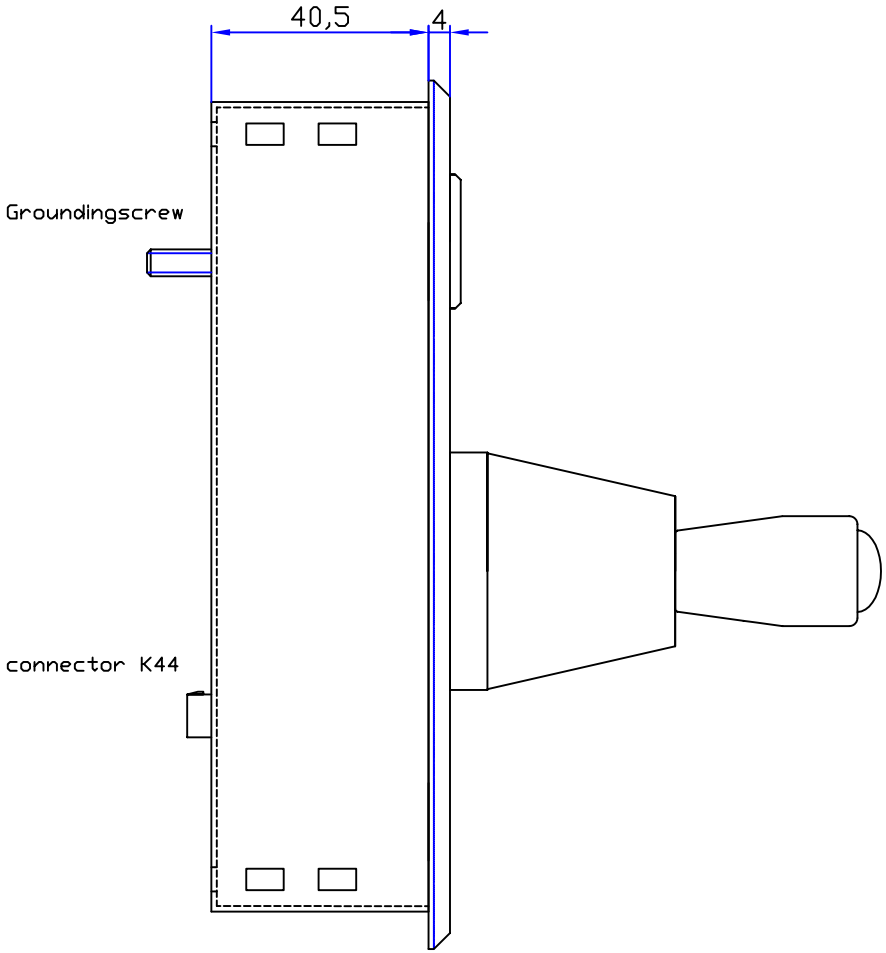
Please remove the entire adhering medium residue. Pay special attention to sealing grooves and gaps which might contain medium residue. We have to ask you to refrain from sending the device back if it is impossible for you to definitely guarantee that all health-endangering material has completely been removed.
Costs which arise due to inadequate cleaning of the device for a potential disposal or for personal injury (cauterisation, etc.) will be charged to the proprietor of the device.

Used trademarks

AT, IBM and PS/2 are registered trademarks of the International Business Machines Corporation.

Microsoft, Windows and Windows NT are registered trademarks of Microsoft Corporation.
All other trademarks mentioned and depicted in the text are trademarks of the respective owners and are recognized as registered.

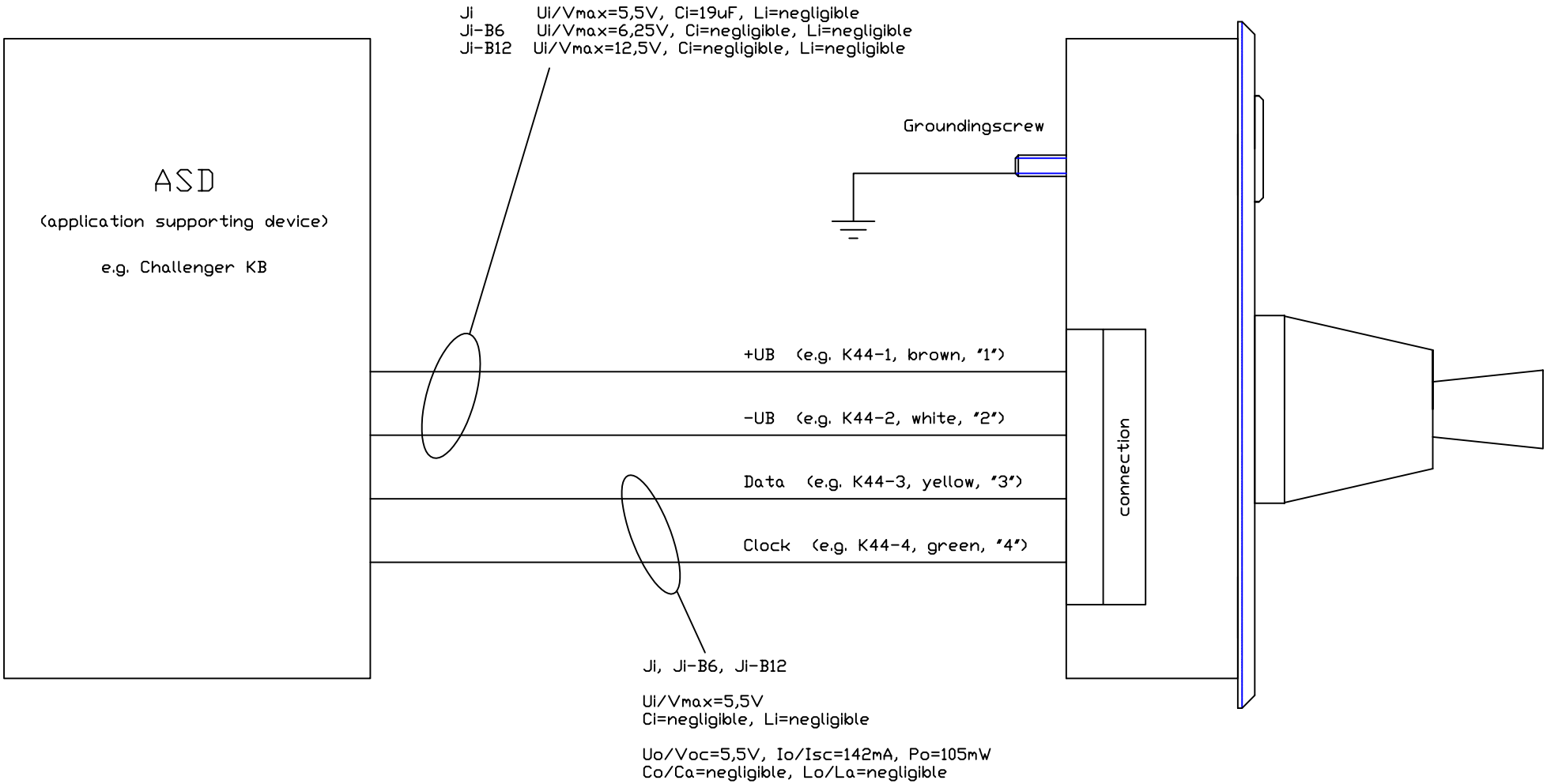




Cut out for switehgear
cabinet 84x153mm
Depth incl. Connector 70mm

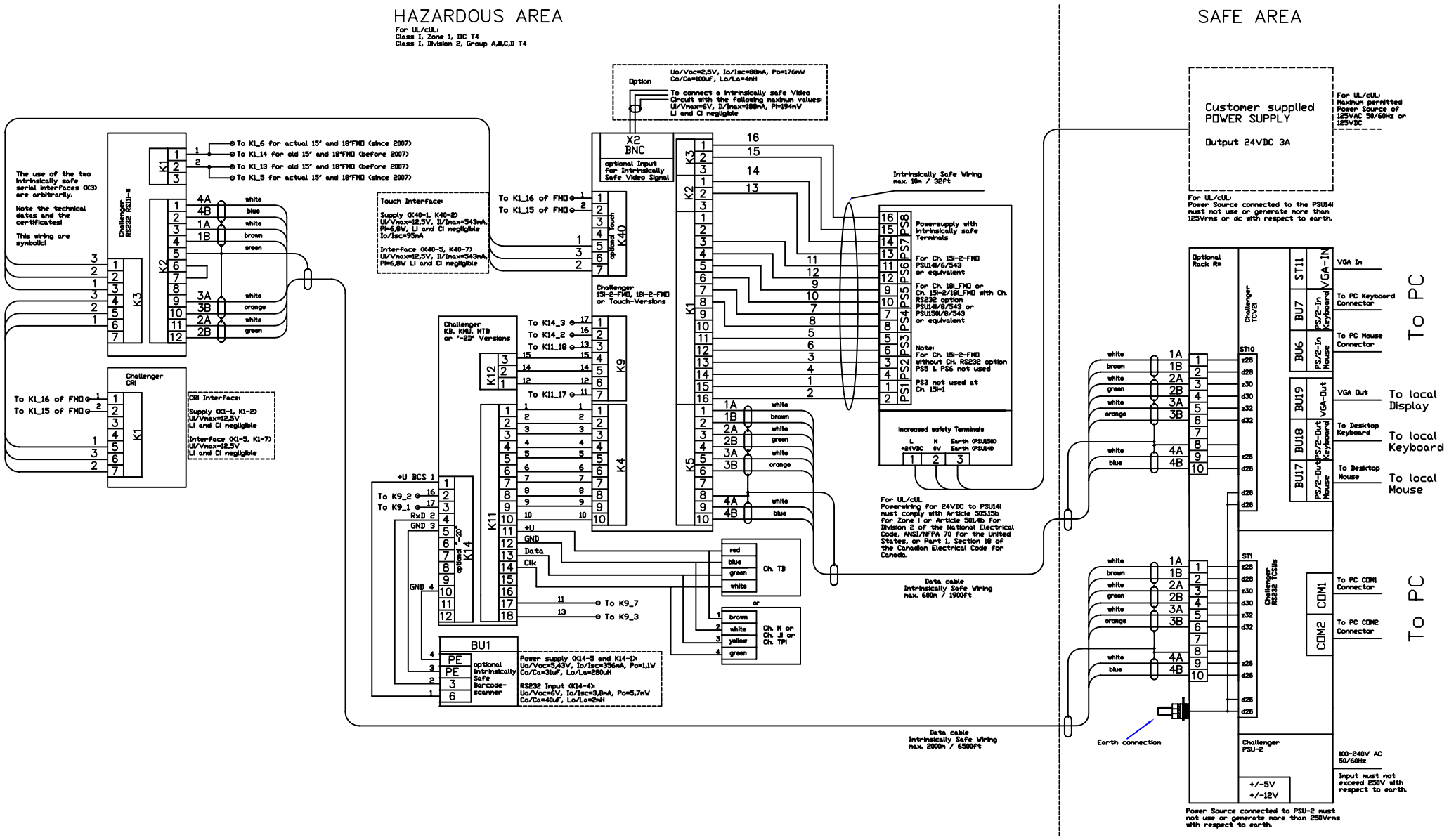
The mechanical construction
and dimension can slide
variantly.

				Ersteller: Jung	Datum: 26.01.04
				Geprüft:	Datum:
				Maßstab: 1 : 1	Gewicht:
				Werkstoff:	Oberfläche:
				Zul.Abw.: Allgemeintoler. mittel DIN 7168	
				Titel: Challenger Ji Joystick dimension	
a	Joystickknob with button	12.12.05	A.Jung	GeCma Components GmbH D-50169 Kerpen, Germany	Zeichnungsnummer: 10100469
Rev.	Änderung	Datum	Name		Blatt: 1/1



For installation refer manual!

				Ersteller: Jung	Datum: 26.01.04
				Geprüft:	Datum:
				Maßstab: 1 : 1	Gewicht:
				Werkstoff:	Oberfläche:
				Zul.Abw.: Allgemeintoler. mittel DIN 7168	
				Titel: Challenger Ji Joystick wiringplan	
b	electrical parameter	30.04.04	A.Jung	GeCma Components GmbH D-50169 Kerpen, Germany	Zeichnungsnummer: 10100470
a	electrical parameter	01.03.04	A.Jung		Blatt: 1/1
Rev.	Änderung	Datum	Name		



All not otherwise specified intrinsically safe wiring max. 5m / 16ft.

For UL/cUL:
All intrinsically Safe wiring must comply with Article 504 of the National Electrical Code, ANSI/NFPA 70 for the United States, or Part I, Section 18 of the Canadian Electrical Code for Canada. All intrinsically safe wiring shall be kept seperate from non-intrinsically safe wiring.

The selected video device connected to X2 or the barcode scanner connected to BU1 shall be approved with intrinsically safe circuits which satisfy the following:
Uo/Voc <= Ui/Vmax
Io/Isc <= Ii/Imax
Co/Ca >= Ci plus Ccable
Lo/La >= Li plus Lcable
Po <= Pi/Pmax

Where cable capacitance and inductance per foot are not known, the following values shall be used:
Ccable=60pF/ft, Lcable=0.2uH/ft

Rev.	Änderung	Datum	Name
f	Notes Supply, RSI, Touch, CRI		
e	Additional serial Interface, Touch, CRI	28.08.04	A.Jung
d	change voltage and text	21.05.03	A.Jung
C	add informationtext	20.05.03	A.Jung
b	add text	07.02.03	A.Jung
a	technical data, added PSU2	24.01.03	A.Jung

Ersteller: A.Jung — Datum: 20.01.02
Geprüft: — Datum:
Maßstab: 1:1 — Gewicht:
Werkstoff: — Oberfläche:
Zul.Abw.: Allgemeintoler. mittel DIN 7168

Titel:
Challenger 15i/18i Installationplan

GeCma Components GmbH
D-50169 Kerpen, Germany

Zeichnungsnummer: 30100162

Blatt: 1/1

(1) # EG-Baumusterprüfbescheinigung

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**

(3) EG Baumusterprüfbescheinigungsnummer

TÜV 04 ATEX 2459

(4) Gerät: Challenger Joystick Typ Ji

(5) Hersteller: Gecma Components GmbH

(6) Anschrift: Heisenbergstr. 26-40
D-50169 Kerpen

(7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

(8) Die TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Zertifizierungsstelle, bescheinigt als benannte Stelle Nr. 0032 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaften vom 23. März 1994 (94/9/EG) die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.

Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfbericht Nr. 04 YEX 551344 festgelegt.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit

EN 50014:1997 + A1 +A2 **EN 50020:2002** **EN 1127-1:1997** **EN 50284:1999**

(10) Falls das Zeichen "X" hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.

(11) Diese EG-Baumusterprüfbescheinigung bezieht sich nur auf Konzeption und Prüfung des festgelegten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.

(12) Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

II 1 G EEx ia IIB T4 bzw.
II 2 G EEx ia IIC T4

TÜV NORD CERT GmbH & Co. KG
TÜV CERT-Zertifizierungsstelle
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hannover, 15.04.2004

TÜV NORD CERT

Der Leiter

TÜV CERT A4 10.02 10.000 L6

Diese EG-Baumusterprüfbescheinigung darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der TÜV NORD CERT GmbH & Co. KG

(13) ## ANLAGE

(14) ## EG-Baumusterprüfbescheinigung Nr. TÜV 04 ATEX 2459

(15) Beschreibung des Gerätes

Der Challenger Joystick Typ Ji ist ein eigensicheres Bedienelement, z.B. zur Steuerung eines Zeigers auf einer Anzeige.

Der Gehäuseschutz der Elektronik rückseitig der Frontplatte ist IP 20, frontseitig IP 65.

Erfordert die Anwendung eine höhere Gehäuseschutzart, so ist das Gehäuse in ein geeignetes Gehäuse einzubauen.

Der elektrische Anschluss kann mit Anschlussklemmen oder mit einem vorgefertigten Anschlusskabel erfolgen. Die max. Länge des Anschlusskabels ist 50 m, siehe aber auch unten.

In der Frontplatte können sich neben dem Steuerungshebels bis zu 3 Taster befinden.

Die zulässigen Umgebungstemperaturen in Abhängigkeit der Kategorie der Anwendung sind der folgenden Tabelle zu entnehmen:

Kategorie	Zulässiger Umgebungstemperaturbereich
1	-20°C bis 60°C
2	-40°C bis 70°C

Elektrische Daten

Typ Ji

Versorgung
(Klemmen K44-1,
bzw.
Litze braun oder 1;
Gnd: K44-2 bzw.
Litze weiß oder 2)

in Zündschutzart Eigensicherheit EEx ia IIC/IIB
nur zum Anschluss an bescheinigte eigensichere Stromkreise mit dem folgenden Höchstwert:
U_i = 5,5 V
U_o = 5,5 V
I_o = I_i des Datenstromkreises aber ≤ 77 mA
P_o = Pi des Datenstromkreises aber ≤ 105 mW
Kennlinie: linear
C_i = 19 µF
Die wirksame innere Induktivität ist vernachlässigbar klein.

Datenstromkreis
Data: Klemmen K44-3
bzw. Litze gelb oder 3
Clock: Klemmen K44-4
bzw. Litze grün oder 4)

in Zündschutzart Eigensicherheit EEx ia IIC/IIB
nur zum Anschluss an bescheinigte eigensichere Stromkreise mit den folgenden Höchstwerten:

U_i = 5,5 V
U_o = 5,5 V
I_o = 142 mA (dynamisch)
I_o = I_i des Versorgungsstromkreises
aber ≤ 50 mA (statisch) je Kreis
P_o = P_i des Versorgungsstromkreises aber ≤ 105 mW
Kennlinie: linear
Die wirksame innere Kapazität und Induktivität sind vernachlässigbar klein.

BA 02.11.03

Die Regeln für das Zusammenschalten eigensicherer Stromkreise sind zu beachten.

Die eigensicheren Stromkreise sind galvanisch miteinander verbunden.

Der Challenger Joystick Typ Ji ist geeignet zum Einbau und Anschluss in die unter DMT 00 ATEX E 089 X, mit 1. Nachtrag, bescheinigten Geräte Challenger KB, KB-2*, KMU, KMU-2*, MTD, MTD-2* und die unter TÜV 03 ATEX 2251 bescheinigten Geräte KB-FPI und KB-2D-FPi anstelle des Challenger TB bzw. Challenger M als auch als Austauschbar gegen Challenger TB bzw. Challenger M.
Bedingt durch das Schutzniveau und die Kategorie der o.g. Geräte ist das Schutzniveau des eigensicheren Gesamtstromkreises „ib" und die Kategorie der Gesamtanordnung ist 2.
Die max. zulässige Leitungslänge ist 5 m.

(16) Prüfungsunterlagen sind im Prüfbericht Nr. 04 YEX 551344 aufgelistet.

(17) Besondere Bedingung

keine

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen

keine zusätzlichen

1. ERGÄNZUNG
zur
EG-Baumusterprüfbescheinigung Nr. TÜV 04 ATEX 2459

Gerät:	**Challenger Joystick Typ Ji, Ji-B6 und Ji-B12**
Hersteller:	Gecma Components GmbH
Anschrift:	Heisenbergstr. 26-40 D-50169 Kerpen

Die Challenger Joystick Type Ji werden um die Typen Ji-B6 und Ji-B12 erweitert.
Zudem ändert sich der mechanische Aufbau. Wahlweise kann ein Taster des Joysticks auch im Steuerknauf angebracht werden.

Elektrische Daten:

Bei Anwendungen die Kategorie 1 G-Betriebsmittel erfordern, müssen die eigensicheren Stromkreise in Schutzniveau „ia" ausgeführt sein.

Typ Ji

Versorgung (Klemme K44-1, bzw. Litze braun oder 1 Gnd: K44-2 bzw. Litze weiß oder 2)	in Zündschutzart Eigensicherheit EEx ia/ib IIC/IIB nur zum Anschluss an bescheinigte eigensichere Stromkreise Höchstwerte: U_i = 5,5 V P_i = 0,9 W U_o = 5,5 V I_o = I_i des Datenstromkreises aber ≤ 77 mA P_o = P_i des Datenstromkreises aber ≤ 105 mW Kennlinie: linear C_i = 19 µF Die wirksame innere Induktivität ist vernachlässigbar klein.
Datenstromkreis (Data: Klemme K44-3 bzw. Litze gelb oder 3 Clock: Klemme K44-4 bzw. Litze grün oder 4)	in Zündschutzart Eigensicherheit EEx ia/ib IIC/IIB nur zum Anschluss an bescheinigte eigensichere Stromkreise Höchstwerte: U_i = 5,5 V U_o = 5,5 V I_o = I_i des Versorgungsstromkreises aber ≤ 77 mA P_o = P_i des Versorgungsstromkreises aber ≤ 105 mW Kennlinie: linear Die wirksame innere Kapazität und Induktivität ist vernachlässigbar klein.

Typ Ji-B6

Versorgung (Klemme K44-1, bzw. Litze braun oder 1; Gnd: K44-2 bzw. Litze weiß oder 2)	in Zündschutzart Eigensicherheit EEx ia/ib IIC/IIB nur zum Anschluss an bescheinigte eigensichere Stromkreise Höchstwerte: U_i = 6,25 V U_o = 5,5 V I_o = 74 mA (kurzzeitig) I_o = 38 mA (statisch) P_o = P_i des Datenstromkreises aber ≤ 53 mW Kennlinie: linear: linear Die wirksame innere Kapazität und Induktivität ist vernachlässigbar klein.
Datenstromkreis (Data: Klemme K44-3 bzw. Litze gelb oder 3 Clock: Klemme K44-4 bzw. Litze grün oder 4)	in Zündschutzart Eigensicherheit EEx ia/ib IIC/IIB nur zum Anschluss an bescheinigte eigensichere Stromkreise Höchstwerte: U_i = 5,5 V U_o = 6,25 V I_o = 77 mA (kurzzeitig) I_o = I_i von der Versorgung aber ≤ 43 mA (statisch) P_o = P_i von der Versorgung aber ≤ 67 mW Kennlinie: linear Die wirksame innere Kapazität und Induktivität ist vernachlässigbar klein.

Type Ji-B12

Versorgung (Klemme K44-1, bzw. Litze braun oder 1 Gnd: K44-2 bzw. Litze weiß oder 2)	in Zündschutzart Eigensicherheit EEx ia/ib IIC/IIB nur zum Anschluss an bescheinigte eigensichere Stromkreise Höchstwerte: U_i = 12,5 V U_o = 5,5 V I_o = 11 mA (kurzzeitig) I_o = 9 mA (statisch) P_o = P_i des Datenstromkreises aber ≤ 15 mW Kennlinie: linear Die wirksame innere Kapazität und Induktivität ist vernachlässigbar klein.

1 Ergänzung zur EG-Baumusterprüfbescheinigung Nr. TÜV 04 ATEX 2459

Datenstromkreis (Data: Klemme K44-3 bzw. Litze gelb oder 3 Clock: Klemme K44-4 bzw. Litze grün oder 4)	in Zündschutzart Eigensicherheit EEx ia/ib IIC/IIB nur zum Anschluss an bescheinigte eigensichere Stromkreise Höchstwerte: U_i = 5,5 V U_o = 12,5 V I_o = 77 mA (kurzzeitig) I_o = I_i des Versorgungsstromkreises aber ≤ 21 mA (statisch) P_o = P_i des Versorgungsstromkreises aber ≤ 65 mW Kennlinie: linear Die wirksame innere Kapazität und Induktivität ist vernachlässigbar klein.

Die Regeln für die Zusammenschaltung eigensicherer Stromkreise sind zu beachten.

Die eigensicheren Stromkreise sind galvanisch miteinander verbunden.

Alle weiteren Angaben gelten unverändert.

Die Prüfungsunterlagen sind im Prüfbericht Nr. 06YEX 551344-d aufgelistet.

TÜV NORD CERT GmbH & Co. KG
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D-30519 Hannover
Tel.: +49 (0) 511 986-1455
Fax: +49 (0) 511 986-1590

Hannover, 24.01.2006

Der Leiter

TÜV CERT

(1) EC Design Test Certificate

(2) Devices and safety systems for use in accordance with regulations in areas at risk from explosion – **guideline 94/9/EC**

(3) EC design test certificate number:

TÜV 04 ATEX 2459

(4) Device: Challenger Joystick Typ Ji

(5) Manufacturer: Gecma Components GmbH

(6) Address: Heisenbergstr. 26-40
D 50169 Kerpen

(7) The construction of this device and the different permitted version are specified in the appendix to this design test certificate.

(8) The TÜV NORD CERT GmbH & Co.KG, TÜV CERT certification agency, certifies - as appointed office no. 0032 in accordance with the guideline of the council of the European Community of 23rd March 1994 (94/9/EC) – the fulfilment of fundamental safety and health requirements for the design and manufacture of devices and safety systems for correct use in areas at risk from explosion, in accordance with Appendix II of the guideline.
The results of the test are set out in the confidential test report no. 04 YEX 551344.

(9) The basic safety and health requirements are met by conformity with

EN 50014:1997 + A1 + A1 EN 50020:2002 EN 1127:1997 EN 50284:1999

(10) If there is an “X” sign behind the certification number, special conditions for the safe use of the device in the appendix to certificate are referred to.

(11) This EC design test certificate only relates to the design and testing of the specified device in accordance with guideline 94/9/EC. Further requirements of these guidelines apply for the manufacturing and the bringing into circulation of this device. These requirements are not covered by this certificate.

(12) The marking of the device must contain the following information:

II 1 G EEx ia IIB T4 and
II 2 G EEx ib IIC T4, resp.

TÜV NORD CERT GmbH & Co. KG
TÜV CERT certification body
Am TÜV 1
D-30519 Hannover
Phone: 0511 986-1470
Fax: 0511-986-2555

Hannover, 15.04.2004

sd./- illegible
The Head

This certificate must only be circulated without any modification.
Excerpts or changed require the approval of TÜV NORD CERT GmbH & Co. KG

(13) **Annex**

(14) **EC Type Test Certificate No. TÜV 04 ATEX 2459**

(15) Description of the equipment:

The Challenger Joystick (Ji) is an intriniscally safe operating device, e.g. for controlling a pointer on a display.

Behind the front plate the electronic components are protected with a housing of at least IP 20. The protection from front is IP65.

Is a higher enclosureprotection necessary the unit have to be mountet in a suitable hausing.

The connection can be made via a premanufactured terminal strip or K44 connection. The maximum cablelength is 50m. Refer following text.

In the frontplate can be mountet, beside the joysticklever, up to three buttons.

The permitted ambient temperature range for each type can be found in the following table:

Category	Ambient Temperature Range
1	-20°C to 60°C
2	-40°C to 70°C

Electrical Data

Type Ji

Supply Current Circuit (Terminals K44-1 or cable brown or 1; K44-2 or cable white or 2)	In explosion protection type intrinsically safety EEx ia IIC/IIB Only for connection to certified intrinsically safe circuits Ui = 5.5 V U_o = 5,5 V I_o = I_i of datacircuit but ≤ 77mA P_o= P_i of datacircuit but ≤ 105mW Characteristic curve: linear C_i = 19uF The effective internal inductance are negligibly small.
Interface circuit (Data: Terminals K44-3 or cable yellow or 3 Clock: Terminal K44-4 or cable green or 4)	In explosion protection type intrinsically safety EEx ia IIC/IIB Only for connection to certified intrinsically safe circuits Ui = 5.5 V U_o = 5,5 V I_o = 142mA (dynamic) I_o = I_i of supplycircuit but ≤ 50mA (static) each circuit P_o = P_i of supplycircuit but ≤ 105mW Characteristic curve: linear C_i = 19uF The effective internal inductance are negligibly small.

This certificate must only be circulated without any modification.
Excerpts or changed require the approval of TÜV NORD CERT GmbH & Co. KG

Annex to EC Type Test Certificate No. TÜV 03 ATEX 2459

Note the rules for connecting intrinsically safe circuits.

The intrinsically safe circuits are galvanic together connected.

The Challenger Joystick Typ Ji are suitable for mount and connecting to the under DMT 00 ATEX E 089 X with 1. supplement, certificatet devices Challenger KB, KB-2*, KMU, KMU-2*, MTD, MTD-2* and under TÜV 03 ATEX 2251 certificatet devices KB-FPi and KB-2D-FPi instead of Challenger TB and Challenger M.

Becouse of the protectionlevel and category of the in the top listed devices the protectionlevel of the intrinsically safe circuits are “ib” and category 2 of the complete equipment.
The maximum permitted cablelength are 5m

(16) The test documents are listed in test report no. 04 YEX 551344.

(17) Particular requirement:
None

(18) Fundamental safety and health requirements:
None in addition

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Excerpts or changed require the approval of TÜV NORD CERT GmbH & Co. KG

First Supplement
for
TÜV CERT

EC Design Test Certificate TÜV 04 ATEX 2459

Device: **Challenger Joystick Typ Ji, Ji-B6 and Ji-B12**

Manufacturer: Gecma Components GmbH

Address: Heisenbergstr. 26-40
D 50169 Kerpen

The Challenger Joystick type Ji will be expanded with the types Ji-B6 and Ji-B12 Additional the mechanical construction modified. Optional a button can be located to the joysticklever.

Electrical Data

When use in category 1 G the circuits must be protected by protectionlevel “ia”.

Type Ji

Supply Current Circuit (Terminals K44-1 or cable brown or 1; K44-2 or cable white or 2)	In explosion protection type intrinsically safety EEx ia IIC/IIB Only for connection to certified intrinsically safe circuits Ui = 5.5 V Pi = 0,9 W U_o = 5,5 V I_o = I_i of datacircuit but ≤ 77mA P_o= P_i of datacircuit but ≤ 105mW Characteristic curve: linear C_i = 19uF The effective internal inductance are negligibly small.
Interface circuit (Data: Terminals K44-3 or cable yellow or 3 Clock: Terminal K44-4 or cable green or 4)	In explosion protection type intrinsically safety EEx ia IIC/IIB Only for connection to certified intrinsically safe circuits Ui = 5.5 V U_o = 5,5 V I_o = I_i of supplycircuit but ≤ 77mA P_o = P_i of supplycircuit but ≤ 105mW Characteristic curve: linear The effective internal capacitances and inductance are negligibly small.

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Annex to 1. supplement of EC Type Test Certificate No. TÜV 03 ATEX 2459

Type Ji-B6

Supply Current Circuit (Terminals K44-1 or cable brown or 1; K44-2 or cable white or 2)	In explosion protection type intrinsically safety EEx ia IIC/IIB Only for connection to certified intrinsically safe circuits Ui = 6,25 V U_o = 5,5 V I_o = 74 mA (short term) I_o = 38 mA (static) P_o= P_i of datacircuit but ≤ 53mW Characteristic curve: linear The effective internal capacitances and inductance are negligibly small.
Interface circuit (Data: Terminals K44-3 or cable yellow or 3 Clock: Terminal K44-4 or cable green or 4)	In explosion protection type intrinsically safety EEx ia IIC/IIB Only for connection to certified intrinsically safe circuits Ui = 5.5 V U_o = 6,25 V I_o = 77 mA (short term) I_o = I_i of supplycircuit but ≤ 43mA (static) P_o = P_i of supplycircuit but ≤ 67mW Characteristic curve: linear The effective internal capacitances and inductance are negligibly small.

Type Ji-B6

Supply Current Circuit (Terminals K44-1 or cable brown or 1; K44-2 or cable white or 2)	In explosion protection type intrinsically safety EEx ia IIC/IIB Only for connection to certified intrinsically safe circuits Ui = 12,5 V U_o = 5,5 V I_o = 11 mA (short term) I_o = 9 mA (static) P_o= P_i of datacircuit but ≤ 15mW Characteristic curve: linear The effective internal capacitances and inductance are negligibly small.

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Interface circuit (Data: Terminals K44-3 or cable yellow or 3 Clock: Terminal K44-4 or cable green or 4)	In explosion protection type intrinsically safety EEx ia IIC/IIB Only for connection to certified intrinsically safe circuits Ui = 5.5 V U_o = 12,5 V I_o = 77 mA (short term) I_o = I_i of supplycircuit but ≤ 21mA (static) P_o = P_i of supplycircuit but ≤ 65mW Characteristic curve: linear The effective internal capacitances and inductance are negligibly small.

Note the rules for connecting intrinsically safe circuits.

The intrinsically safe circuits are galvanic together connected.

All other specifications valid without changes.

The test documents are listed in test report no. 04 YEX 551344-d.

TÜV NORD CERT GmbH & Co. KG
TÜV CERT certification body
Am TÜV 1
D-30519 Hannover
Phone: 0511 986-1470
Fax: 0511-986-2555

Hannover, 24.01.2006

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The Head

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Konformitätsaussage

(1)

(2) Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen - **Richtlinie 94/9/EG**

(3) Prüfbescheinigungsnummer

TÜV 04 ATEX 2647 X

(4) Gerät: Challenger Joystick Typ Ji, Ji-B6 und Ji-B12

(5) Hersteller: Gecma Components GmbH

(6) Anschrift: Heisenbergstr. 26-40
D-50169 Kerpen

(7) Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Prüfbescheinigung festgelegt.

(8) Die TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Zertifizierungsstelle, bescheinigt als benannte Stelle Nr. 0032 nach Artikel 9 der Richtlinie des Rates der Europäischen Gemeinschaften vom 23. März 1994 (94/9/EG) die Erfüllung der grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie.

Die Ergebnisse der Prüfung sind in dem vertraulichen Prüfbericht Nr.04 YEX 551344b festgelegt.

(9) Die grundlegenden Sicherheits- und Gesundheitsanforderungen werden erfüllt durch Übereinstimmung mit

EN 50281-1-1: 1998 +A1:2002

(10) Falls das Zeichen "X" hinter der Bescheinigungsnummer steht, wird auf besondere Bedingungen für die sichere Anwendung des Gerätes in der Anlage zu dieser Bescheinigung hingewiesen.

(11) Diese Konformitätsaussage bezieht sich nur auf Konzeption und Prüfung des festgelegten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes. Diese Anforderungen werden nicht durch diese Konformitätsaussage abgedeckt.

(12) Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

II 3 D T60°C IP 6X

TÜV NORD CERT GmbH & Co. KG
TÜV CERT-Zertifizierungsstelle
Am TÜV 1
D-30519 Hannover
Tel.: 0511 986-1470
Fax: 0511 986-2555

Hannover, 29.10.2004

TÜV NORD CERT

Der Leiter

Diese Konformitätsaussage darf nur unverändert weiterverbreitet werden.
Auszüge oder Änderungen bedürfen der Genehmigung der TÜV NORD CERT GmbH & Co. KG

(13) **ANLAGE**

(14) **Konformitätsaussage Nr. TÜV 04 ATEX 2647 X**

(15) Beschreibung des Gerätes

Der Challenger Joystick der Typen Ji, Ji-B6 und Ji-B12 ist ein staubdichtes Bedienelement, z.B. zur Steuerung eines Zeigers auf einer Anzeige.

Der elektrische Anschluss kann mit Anschlussklemmen oder mit einem vorgefertigten Anschlusskabel erfolgen, wobei der elektrische Anschluss üblicherweise im Bereich des zusätzlichen Gehäuses erfolgt.

In der Frontplatte können sich neben dem Steuerungshebels bis zu 3 Taster befinden.

Der zulässige Umgebungstemperaturbereich ist: -25°C bis 60°C.

Elektrische Daten

Versorgung (Klemmen K44-1, bzw. Litze braun oder 1; Gnd: K44-2 bzw. Litze weiß oder 2)	zum Anschluss von Stromkreisen mit folgenden Höchstwerten in Normalbetrieb: U = 5,5 V für Typ Ji U = 6,25 V für Typ Ji-B6 U = 12,5 V für Typ Ji-B12
Datenstromkreis Data: Klemmen K44-3 bzw. Litze gelb oder 3 Clock: Klemmen K44-4 bzw. Litze grün oder 4)	zum Anschluss von Stromkreisen mit folgenden Höchstwerten in Normalbetrieb: U = 5,5 V

(16) Prüfungsunterlagen sind im Prüfbericht Nr. 04 YEX 551344b aufgelistet.

(17) Besondere Bedingungen

Der Challenger Joystick ist zum Einbau in ein Gehäuse vorgesehen, welches mindestens die Anforderungen von Kategorie 3D nach EN 50281-1-1 erfüllt.

(18) Grundlegende Sicherheits- und Gesundheitsanforderungen

keine zusätzlichen

BA 02.07.04

TÜV NORD

1. E R G Ä N Z U N G
zur
Konformitätsaussage Nr. TÜV 04 ATEX 2647 X

Gerät:	**Challenger Joystick Typ Ji, Ji-B6 und Ji-B12**
Hersteller:	Gecma Components GmbH
Anschrift:	Heisenbergstr. 26-40 D-50169 Kerpen

Der Challenger Joystick, Typ Ji, Ji-B6 und Ji-B12 dürfen zukünftig auch entsprechend den Prüfungsunterlagen gefertigt und betrieben werden.

Geändert wird der mechanische Aufbau. Wahlweise kann ein Taster des Joysticks auch im Steuerknauf angebracht werden.

Alle weiteren Angaben einschließlich der Besonderen Bedingungen gelten unverändert für diese Ergänzung.

Die Prüfungsunterlagen sind im Prüfbericht Nr. 06 YEX 551344-e aufgelistet.

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Tel.: +49 (0) 511 986-1455
Fax: +49 (0) 511 986-1590

Hannover, 24.01.2006

Der Leiter

BA 02 01.05 1.000.0020

Translation

TÜV CERT

Declaration of conformity

(1)

(2) Devices and safety systems for use in accordance with regulations in areas at risk from explosion – **guideline 94/9/EC**

(3) EC design test certificate number:

TÜV 04 ATEX 2647 X

(4) Device: Challenger Joystick Typ Ji, Ji-B6, Ji-B12

(5) Manufacturer: Gecma Components GmbH

(6) Address: Heisenbergstr. 26-40
D 50169 Kerpen

(7) The construction of this device and the different permitted version are specified in the appendix to this design test certificate.

(8) The TÜV NORD CERT GmbH & Co.KG, TÜV CERT certification agency, certifies - as appointed office no. 0032 in accordance with the guideline of the council of the European Community of 23rd March 1994 (94/9/EC) – the fulfilment of fundamental safety and health requirements for the design and manufacture of devices and safety systems for correct use in areas at risk from explosion, in accordance with Appendix II of the guideline.
The results of the test are set out in the confidential test report no. 04 YEX 551344b.

(9) The basic safety and health requirements are met by conformity with

EN 50281-1-1: 1998 +A1 :2002

(10) If there is an “X” sign behind the certification number, special conditions for the safe use of the device in the appendix to certificate are referred to.

(11) This EC design test certificate only relates to the design and testing of the specified device in accordance with guideline 94/9/EC. Further requirements of these guidelines apply for the manufacturing and the bringing into circulation of this device. These requirements are not covered by this certificate.

(12) The marking of the device must contain the following information:

II 3 D T60℃ IP 6X

TÜV NORD CERT GmbH & Co. KG
TÜV CERT certification body
Am TÜV 1
D-30519 Hannover
Phone: 0511 986-1470
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Hannover, 29.10.2004

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(13) **Annex**

(14) **EC Type Test Certificate No. TÜV 04 ATEX 2647 X**

(15) Description of the equipment:

The Challenger Joystick (Ji) is an intriniscally safe operating device, e.g. for controlling a pointer on a display.

The electrical connection realized with terminals or with a premounted cable, whereby the electrical connection normally realized inside the additional enclosure.

In the frontplate can be mountet, beside the joysticklever, up to three buttons.

The operationtemperature specified to -25℃ up to 6 0℃.

Electrical Data

Type Ji

Supply Current Circuit (Terminals K44-1 or cable brown or 1; K44-2 or cable white or 2)	To connect to circuits with follow max. values under normal conditions: U = 5,5V for type Ji U = 6,25V for type Ji-B6 U= 12,5V for type Ji-B12
Interface circuit (Data: Terminals K44-3 or cable yellow or 3 Clock: Terminal K44-4 or cable green or 4)	To connect to circuits with follow max. values under normal conditions: U = 5,5V

(16) The test documents are listed in test report no. 04 YEX 551344b.

(17) Particular requirement:
The Challenger Joystick must be mounted into a enclosure which fulfill the requirements of category 3D EN 50281-1-1 as minimum.

(18) Fundamental safety and health requirements:
None in addition

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Excerpts or changed require the approval of TÜV NORD CERT GmbH & Co. KG

First Supplement
for
TÜV CERT

EC Design Test Certificate TÜV 04 ATEX 2647 X

Device: **Challenger Joystick Typ Ji, Ji-B6 and Ji-B12**

Manufacturer: Gecma Components GmbH

Address: Heisenbergstr. 26-40
D 50169 Kerpen

The Challenger Joystick type Ji, Ji-B6 and Ji-B12 will be produced regarding the new productiondirectives.

The mechanical construction modified. Optional a button can be located to the joysticklever.

All other specifications valid without changes.

The test documents are listed in test report no. 04 YEX 551344-e.

TÜV NORD CERT GmbH & Co. KG
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Hannover, 24.01.2006

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IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx TUN 04.0019** Issue No.: **1**

Status: **Current**

Date of Issue: **2006-03-06** Page **1** of **5**

Applicant: **Gecma Components GmbH**
Heisenbergstr. 26-40
50169 Kerpen
Germany

Electrical Apparatus: **Challenger Joystick**
Optional accessory: **Type Ji, Ji-B6 and Ji-B12**

Type of Protection: **Intrinsic Safety "ia"**

Marking: **Zone 1 Ex ia IIC T4**
Zone 0 Ex ia IIB T4

Approved for issue on behalf of the IECEx Certification Body: Karl-Heinz Schwedt

Position: Head of IECExCB

Signature: (for printed version)

Date: 06 03 2006

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

TÜV NORD CERT GmbH & Co. KG
Am TUV1
D-30519 Hannover
Germany

TUV NORD

IECEx Certificate of Conformity

Certificate No.: **IECEx TUN 04.0019**

Date of Issue: **2006-03-06** Issue No.: **1**

Manufacturer: **Gecma Component GmbH**
Heisenbergstr. 26-40
50169 Kerpen
Germany

Manufacturing location(s):

Gecma Components GmbH
Heisenbergstr. 26-40
50169 Kerpen
Germany

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacture'rs quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2000 Edition: 3.1	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'
IEC 60079-26 : 2004 Edition: 1	Electrical apparatus for explosve gas atmospheres - Part 26: Construction, test and marking of Group II Zone 0 electrical apparatus

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

IECEx ATR:	File Reference:
DE/TUN/05/551344c	**05 YEX 551344c**
DE/TUN/ExTR06.0007/00	**DE/TUN/06/551344f**
DE/TUN/ExTR06.0008/00	**DE/TUN/06/551344g**

IECEx Certificate of Conformity

Certificate No.: **IECEx TUN 04.0019**

Date of Issue: **2006-03-06** Issue No.: **1**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The Challenger Joystick type Ji, Ji-B6 and Ji-B12 is an intrinsically safe control element e.g. for the control of a pointer in a display.

The degree of protection of the device is IP 20 for the rear side and for the front side IP 65.
The electrical connection is realized with terminals or with a prefabricated connection cable. The maximum length of the prefabricated cable is 50 m.
The Challenger Joystick can be equipped with up to three push buttons.
One button may be mounted in the joystick. The other buttons are placed in the front panel.
The permissible ambient temperature range is:
-40°C to 70°C for zone 1 applications and
-20°C to 60°C for zone 0 applications.

Electrical data see: Annexe to IECEx TUN 04.0019, issue no.: 1

CONDITIONS OF CERTIFICATION: NO

IECEx Certificate of Conformity

Certificate No.: **IECEx TUN 04.0019**

Date of Issue: **2006-03-06** Issue No.: **1**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

certification for application in zone 0

IECEx Certificate of Conformity

Certificate No.: **IECEx TUN 04.0019**

Date of Issue: **2006-03-06** Issue No.: **1**

Page **5** of **5**

Additional information:

Annexe: Annexe_TUN_04_0019-V1.pdf

Electrical data

For zone 0 applications all intrinsically safe circuits must be realised in category "ia".

Typ Ji

Supply (terminals K44-1, circuits resp wire brown or 1 Gnd: K44-2 resp. wire white or 2)	in type of protection Intrinsic Safety Ex ia/ib IIC/IIB only for the connection to certified intrinsically safe Maximum values: U_i = 5,5 V P_i = 0,9 W U_o = 5,5 V I_o = I_i of the data circuits but ≤ 77 mA P_o = P_i of the data circuits but ≤ 105 mW Characteristic line: linear C_i = 19 µF The effective internal inductance is negligibly small.
Data circuit (Data: terminal K44-3 circuits resp. wire yellow or 3 Clock: terminals K44-4 resp. wire green or 4)	in type of protection Intrinsic Safety Ex ia/ib IIC/IIB only for the connection to certified intrinsically safe Maximum values: U_i = 5,5 V U_o = 5,5 V I_o = I_i of the supply circuit but ≤ 77 mA P_o = P_i of the supply circuit but ≤ 105 mW Characteristic line: linear The effective internal capacitance and inductance are negligibly small.

Type Ji-B6

Supply (terminals K44-1, circuits resp wire brown or 1; Gnd: K44-2 resp. wire white or 2)	in type of protection Intrinsic Safety Ex ia/ib IIC/IIB only for the connection to certified intrinsically safe Maximum values: U_i = 6,25 V U_o = 5,5 V I_o = 74 mA (temporally) I_o = 38 mA (statically) P_o = P_i of the data circuits but ≤ 53 mW Characteristic line: linear The effective internal inductance and capacitance are negligibly small.

Data circuit (Data: terminal K44-3 circuits resp. wire yellow or 3 Clock: terminals K44-4 resp. wire green or 4)	in type of protection Intrinsic Safety Ex ia/ib IIC/IIB only for the connection to certified intrinsically safe Maximum values: U_i = 5,5 V U_o = 6,25 V I_o = 77 mA (temporally) I_o = I_i of the supply circuit but ≤ 43 mA (statically) P_o = P_i of the supply circuit but ≤ 67 mW Characteristic line: linear The effective internal capacitance and inductance are negligibly small.

Type Ji-B12

Supply (terminals K44-1, circuits with resp wire brown or 1 Gnd: K44-2 resp. wire white or 2)	in type of protection Intrinsic Safety Ex ia/ib IIC/IIB only for the connection to certified intrinsically safe Maximum values: U_i = 12,5 V U_o = 5,5 V I_o = 11 mA (temporally) I_o = 9 mA (statically) P_o = P_i of the data circuits but ≤ 15 mW Characteristic line: linear The effective internal inductance and capacitance are negligibly small.
Data circuit (Data: terminal K44-3 circuits Resp. wire yellow or 3 Clock: terminals K44-4 resp. wire green or 4)	in type of protection Intrinsic Safety Ex ia/ib IIC/IIB only for the connection to certified intrinsically safe Maximum values: U_i = 5,5 V U_o = 12,5 V I_o = 77 mA (temporally) I_o = I_i of the supply circuit but ≤ 21 mA (statically) P_o = P_i of the supply circuit but ≤ 65 mW Characteristic line: linear The effective internal capacitance and inductance are negligibly small.

The rules for the interconnection of intrinsically safe circuits have to be observed.

The intrinsically safe circuits are galvanic connected with each other.

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ГОССТАНДАРТ РОССИИ

СЕРТИФИКАТ СООТВЕТСТВИЯ

№ РОСС DE.ГБ04.В00777

Срок действия с 02.07.2007 г. по 02.07.2010 г.

7324844

ОРГАН ПО СЕРТИФИКАЦИИ

Рег. № РОСС RU.0001.11ГБ04 ЦЕНТР СЕРТИФИКАЦИИ «СТВ»
607190, г. Саров Нижегородской обл., пр. Мира, 37
телефон (83130) 454-78, факс (83130) 455-30

ПРОДУКЦИЯ

Технические устройства вычислительной техники в соответствии с приложением к сертификату;

серийный выпуск

код ОК 005 (ОКП):
40 0000

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ НОРМАТИВНЫХ ДОКУМЕНТОВ

ГОСТ Р 51330.0-99, ГОСТ Р 51330.6-99,
ГОСТ Р 51330.8-99, ГОСТ Р 51330.10-99,
ГОСТ Р 51330.17- 99, ГОСТ Р МЭК 61241-1-1-99
в соответствии с приложением к сертификату

код ТН ВЭД России:
8471 60 700 0
8504 40 900 9

ИЗГОТОВИТЕЛЬ

GeCma Components GmbH
Heisenbergstraße 26-40 D-50169 Kerpen, Deutschland

СЕРТИФИКАТ ВЫДАН

GeCma Components GmbH
Heisenbergstraße 26-40 D-50169 Kerpen, Deutschland
Телефон: +49-2237-6996-0, Факс: +49-2237-6996-99

НА ОСНОВАНИИ

отчета по сертификации № С3-718/07 от 29.06.2007 г. Центра сертификации "СТВ" (Рег. № РОСС RU.0001.11ГБ04)

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ

Условия применения – в соответствии с Дополнением к сертификату

Руководитель органа _____ (подпись) В.В. Байрак (инициалы, фамилия)

Эксперт _____ (подпись) В.Н. Липавский (инициалы, фамилия)

Сертификат имеет юридическую силу на всей территории Российской Федерации

Бланк изготовлен ЗАО "ОПЦИОН" (лицензия № 05-05-09/003 МФ РФ уровень В) тел. (495) 257 2439, 208 7617, г. Москва, 2006 г.

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ГОССТАНДАРТ РОССИИ

1769832

ПРИЛОЖЕНИЕ

К сертификату соответствия № РОСС DE.ГБ04.В00777 Лист 1 из 2

Перечень конкретной продукции, на которую распространяется действие сертификата соответствия

код ОК 005 (ОКП) / код ТН ВЭД СНГ	Наименование и обозначение продукции, ее изготовитель	Обозначение документации, по которой выпускается продукция
8471 60 700 0	15" монитор типа Challenger 15i-2-FMO с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	15" монитор типа Challenger 15i-FMO с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	18" монитор типа Challenger 18i-FMO с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Считыватель карт – идентификатор типа Challenger CRi с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Пальцевый идентификатор типа Challenger FPi с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Клавиатура типа Challenger KB с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Клавиатура с мышью типа Challenger KMU с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Оболочка для защиты от горючей пыли типа Challenger LITE Ex 15/18-FHP, Challenger 15i/18i Dust с маркировкой защиты от воспламенения горючей пыли DIP A22 T_A 80°C, IP65	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99 ГОСТ Р МЭК 61241-1-1-99
8471 60 700 0	Мышь типа Challenger M с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Трекбол типа Challenger TB, TB-2 с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Клавиатура с мышью и декодером типа Challenger MTD с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Блок интерфейса типа Challenger RS232 TCS(RSI)1i 5V1(6V8, 8V2, X) с маркировкой взрывозащиты 1ExibIICT4, [Exib]IIC	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Блок передачи данных типа Challenger TCV 2i с маркировкой взрывозащиты [Exib]IIC	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	15"/18" сенсорный монитор типа Challenger Touch 15i/18i-FMO (-HB, -G-Touch) с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8504 40 900 9	Источник питания для Challenger компонентов типа PSU 14i/*/468 (543) с маркировкой взрывозащиты 2Exqe[ib]IICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.6-99 ГОСТ Р 51330.8-99 ГОСТ Р 51330.10-99

Дополнительные позиции в обозначении, выделенные символом (*),сертификатом не регламентируются

Изготовитель: "GeCma Components GmbH"
Heisenbergstraße 26-40 D-50169 Kerpen, Deutschland

Руководитель органа _____ (подпись) В.В. Байрак (инициалы, фамилия)

Эксперт _____ (подпись) В.Н. Липавский (инициалы, фамилия)

Бланк изготовлен ЗАО "ОПЦИОН" (лицензия № 05-05-09/003 МФ РФ уровень В) тел. (495) 648 6068, 208 7617, г. Москва, 2007 г.

СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
ГОССТАНДАРТ РОССИИ

1769833

ПРИЛОЖЕНИЕ

К сертификату соответствия № РОСС DE.ГБ04.В00777 Лист 2 из 2

Перечень конкретной продукции, на которую распространяется действие сертификата соответствия

код ОК 005 (ОКП) / код ТН ВЭД СНГ	Наименование и обозначение продукции, ее изготовитель	Обозначение документации, по которой выпускается продукция
8504 40 900 9	Источники напряжения для Challenger компонентов типа PSU 150/12(15, 24), PSU 150i/*/468(543) с маркировкой взрывозащиты 2ExqeIIT4, 2Exqe[ib]IICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.6-99 ГОСТ Р 51330.8-99 ГОСТ Р 51330.10-99
8471 60 700 0	Сенсорная панель типа Challenger TPi с маркировкой взрывозащиты 0ExiaIIC/IIBT4 и защиты от воспламенения горючей пыли DIP A22 T_A60°C, IP65	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99 ГОСТ Р МЭК 61241-1-1-99
8471 60 700 0	Джойстик типа Challenger Ji с маркировкой взрывозащиты 0ExiaIIC/IIBT4 и защиты от воспламенения горючей пыли DIP A22 T_A60°C, IP65	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99 ГОСТ Р МЭК 61241-1-1-99
8471 60 700 0	15" монитор высокой светимости типа Challenger 15i-2-HB-FMO с маркировкой взрывозащиты 1ExibIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Мышь типа Challenger Mi – PS2, Mi – PS2-B с маркировкой взрывозащиты 0ExiaIICT4	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99
8471 60 700 0	Клавиатура типа Challenger K**i-PS2 с маркировкой взрывозащиты 0ExiaIICT4 и защиты от воспламенения горючей пыли DIP A21 T_A120°C, IP65	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99 ГОСТ Р МЭК 61241-1-1-99
8471 60 700 0	Панель PC типа Explorer 15i/18i с маркировкой взрывозащиты 2Exem[ia]IICT4 и защиты от воспламенения горючей пыли DIP A21 T_A120°C, IP65	ГОСТ Р 51330.0-99 ГОСТ Р 51330.8-99 ГОСТ Р 51330.10-99 ГОСТ Р 51330.17-99 ГОСТ Р МЭК 61241-1-1-99
8471 60 700 0	Устройства типа USB BT, USB WLAN, USB MS, USB Key для подключения к порту USB с маркировкой взрывозащиты 0ExiaIICT4 и защиты от воспламенения горючей пыли DIP A21 T_A135°C, IP65	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99 ГОСТ Р МЭК 61241-1-1-99
8471 60 700 0	Искробезопасный барьер типа DS USB для подключения устройств USB** с маркировкой взрывозащиты [Exia]IIC	ГОСТ Р 51330.0-99 ГОСТ Р 51330.10-99

Дополнительные позиции в обозначении, выделенные символом (*),сертификатом не регламентируются

Изготовитель: "GeCma Components GmbH"
Heisenbergstraße 26-40 D-50169 Kerpen, Deutschland

Руководитель органа подпись **В.В. Байрак** инициалы, фамилия

Эксперт подпись **В.Н. Липавский** инициалы, фамилия

Бланк изготовлен ЗАО "ОПЦИОН" (лицензия № 05-05-09/003 ИФ РФ уровень В) тел. (495) 640 5066, 258 7817, г. Москва, 2007 г.

ФЕДЕРАЛЬНАЯ СЛУЖБА
ПО ЭКОЛОГИЧЕСКОМУ, ТЕХНОЛОГИЧЕСКОМУ И АТОМНОМУ НАДЗОРУ

РАЗРЕШЕНИЕ

№ РРС 00-25602

На применение

Оборудование (техническое устройство, материал):
Технические устройства вычислительной техники во взрывозащищенном исполнении согласно сертификату соответствия № РОСС DE.ГБ04.В00777 от 02.07.2007 г.

Код ОКП (ТН ВЭД): 40 0000 (8471 60 700 0, 8504 40 900 9)

Изготовитель (поставщик): Фирма "GeCma Components GmbH" (Германия).

Основание выдачи разрешения: Техническая документация, сертификат соответствия ЦС "СТВ" № РОСС DE.ГБ04.В00777 от 02.07.2007 г.

Условия применения:
1. Применять на поднадзорных производствах и объектах согласно маркировке взрывозащиты в соответствии с Руководством по эксплуатации, а также требованиями главы 7.3 ПУЭ.
2. Внесение изменений в техническую документацию и конструкцию технических устройств возможно только по согласованию с аккредитованной испытательной организацией и Федеральной службой по экологическому, технологическому и атомному надзору.

Срок действия разрешения до 30.07.2010

Дата выдачи 30.07.2007

Начальник Управления государственного горного и металлургического надзора Ш.М. Тугуз
(по доверенности № ЮП-23/213 от 12.02.2007)

АВ 025238

Certificate of Compliance

Certificate Number 20050512-E232869
Report Reference E232869-2003 March 06
Issue Date 2005 May 12

Underwriters Laboratories Inc.®

Issued to: GECMA COMPONENTS GMBH
Heisenberg str 26-40
50169 Kerpen Germany

This is to certify that representative samples of Programmable Controllers
Challenger Computer Terminal including all components shown on page 2 of this Certificate.

Have been investigated by Underwriters Laboratories Inc.® in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety:
UL 60079-0 Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
UL 60079-5 Electrical Apparatus for Explosive Gas Atmospheres - Part 5: Powder Filling "q"
UL 60079-7 Electrical Apparatus for Explosive Gas Atmospheres - Part 7: Increased Safety "e"
UL 60079-11 Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"
UL 60950 Safety of Information Technology Equipment

Additional Information: All components that make up the Challenger terminal have an ambient temperature rating of -10 to +60°C. The PSU14i power supply has an input rating of 24 V dc, 3 A. The PSU2 power supply has an input rating of 100 to 240 V ac, 50/60 Hz. The X2 connector on the 15i/18i UVI displays and the BU1 connector on the KB-2D/KBU-2D/MTD-2D keyboards and decoder are assigned entity parameters as stated on the control drawing 30100162.

Only those products bearing the UL Listing Mark should be considered as being covered by UL's Listing and Follow-Up Service.

The UL Listing Mark generally includes the following elements: the symbol UL in a circle: (UL) with the word "LISTED"; a control number (may be alphanumeric) assigned by UL; and the product category name (product identifier) as indicated in the appropriate UL Directory.

Look for the UL Listing Mark on the product

Issued by: Frederic J. Cleary
Frederic J. Cleary / Lead Engineering Associate
Underwriters Laboratories Inc.

Reviewed by: Paul Kelly
Paul Kelly / Operations Manager
Underwriters Laboratories Inc.

Certificate of Compliance

Certificate Number 20050512-E232869
Report Reference E232869-2003 March 06
Issue Date 2005 May 12

Underwriters Laboratories Inc.®

Associated apparatus for use in nonhazardous locations, provides intrinsically safe circuits for use in Class I, Zone 1, Group IIC Hazardous Locations when connected in accordance with control drawing 30100162.

Challenger TCV2i terminal transmission unit, [AEx ib] IIC
Challenger TCS1is RS232 transmission interface, [AEx ib] IIC

Associated apparatus for use in Class I, Zone 1 Group IIC Hazardous Locations, provides intrinsically safe circuits when connected in accordance with control drawing 30100162.

Challenger PSU14i/6/543 terminal power supply unit, AEx qe [ib] IIC T4
Challenger PSU14i/8/543 terminal power supply unit, AEx qe [ib] IIC T4

Class I, Zone 1 Group IIC Hazardous Locations, intrinsically safe when connected in accordance with control drawing 30100162.

Challenger 15i-2-FMO terminal display unit, AEx ib IIC T4
Challenger Touch 15i-2-FMO terminal display, AEx ib IIC T4
Challenger 15i-2-FMO UVI terminal display unit, AEx ib IIC T4
Challenger Touch 15i-2-FMO UVI terminal display, AEx ib IIC T4
Challenger 18i-FMO terminal display unit, AEx ib IIC T4
Challenger Touch 18i-FMO terminal display, AEx ib IIC T4
Challenger 18i-FMO UVI terminal display unit, AEx ib IIC T4
Challenger Touch 18i-FMO UVI terminal display, AEx ib IIC T4
Challenger KB terminal keyboard unit, AEx ib IIC T4
Challenger KB-2D terminal keyboard unit, AEx ib IIC T4
Challenger KMU terminal keyboard unit, AEx ib IIC T4
Challenger KMU-2D terminal keyboard unit, AEx ib IIC T4
Challenger MTD mouse/trackball decoder, AEx ib IIC T4
Challenger MTD-2D mouse/trackball decoder, AEx ib IIC T4
Challenger M terminal mouse unit, AEx ib IIC T4
Challenger TB terminal trackball unit, AEx ib IIC T4
Challenger RSI1i-X RS232 receiving interface, AEx ib IIC T4
Challenger Cri terminal card reader, AEx ib IIC T4

Issued by: Frederic J. Cleary
Frederic J. Cleary / Lead Engineering Associate
Underwriters Laboratories Inc.

Reviewed by: Paul Kelly
Paul Kelly / Operations Manager
Underwriters Laboratories Inc.

Underwriters Laboratories Inc.®

Northbrook Division
333 Pfingsten Road
Northbrook, IL 60062-2096 USA
www.ul.com
tel: 1 847 272 8800
fax: 1 847 272 8129
Customer service: 1 877 854 3577

NOTICE OF AUTHORIZATION TO APPLY THE UL MARK

2006-12-18

Mr. Alexander Jung
Gecma Components Gmbh
Heisenberg Str 26-40
Kerpen, 50169
Germany

Fax number: 223-769-9699
E-mail: a.jung@gecma.com

Reference: File E232869 Project 06NK18272
Product(s): USL/CNL – Joystick Type Ji and Ji SW Intrinsically Safe For Use In Hazardous Locations When Used With the Challenger System and Connected In Accordance With Drawing 30100162

Dear Mr. Jung,

Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

UL's investigation of your product has been completed under the above project number and the subject product was determined to comply with the applicable requirements.

This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Listing Mark only at the factory under UL's Follow-Up Service Program to the subject product(s), which is (are) constructed as described below:

Similar to products covered in the UL Follow-Up Services Procedure, File E232869, Volume 1.

This authorization applies only to the address on this letter.

This authorization is effective from the date of this Notice and only for products at the indicated manufacturing locations. Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent to the indicated manufacturing locations in the near future. Please note that Follow-Up Services Procedures are sent to the manufacturers only unless the Applicant specifically requests this document.

Products that bear the UL Mark shall be identical to those that were evaluated by UL and found to comply with UL's requirements. If changes in construction are discovered, appropriate action will be taken for products not in conformance with UL's requirements and continued use of the UL Mark may be withdrawn.

Sincerely,

Frederic J. Cleary
Lead Engineering Associate
Hazardous Locations, Gas & Oil
Conformity Assessment Services
Tel: 847-664-2743
Fax: 847-313-2743
E-mail: Frederic.J.Cleary@us.ul.com

Reviewed by:

12/19/06

Benjamin Schaefer
Senior Staff Engineer
Hazardous Locations, Gas & Oil
Conformity Assessment Services
E-mail: benjamin.schaefer@us.ul.com

EXPLOSION PROTECTION
CERTIFICATE OF CONFORMITY

Cert No. GYJ06326

This is to certify that the product

Joystick

manufactured by Gecma Component GmbH
(Address: Heisenbergstr.26-40, Kerpen, Germany)

which model is Challenger Ji Series

Ex marking Ex iaⅡC T4

product standard /

drawing number 10100469

has been inspected and certified by NEPSI, and that it conforms to GB 3836.1 –2000 GB 3836.4 -2000

This Approval shall remain in force until 2011.06.08

Remarks 1 Special conditions for safe use specified in the attachment to this certificate.
2 Associated apparatus specified in the attachment to this certificate.

Director

National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation

Issued Date 2006.06.09

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.

103 Cao Bao Road
Shanghai 200233, China
http://www.nepsi.org.cn
Email: info@nepsi.org.cn
Tel:0086 21 64368180
Fax:0086 21 64844580

防 爆 合 格 证

证 号：GYJ06326

由 Gecma Components GmbH
(地址：Heisenbergstr. 26-40, Kerpen, Germany) 制造的产品：

名　　称 操纵杆

型号规格 Challenger Ji 系列

防爆标志 Ex iaⅡC T4

产品标准 /

图样编号 10100469

经图样及技术文件的审查和样品检验，确认上述产品符合 GB 3836.1-2000 GB 3836.4-2000 标准，特颁发此证。有效期自颁发日期起伍 年内有效。

备 注 1 产品使用注意事项详见证书附件。
2 关联设备详见证书附件。

站 长

国家级仪器仪表防爆安全监督检验站

颁发日期 二00六 年 六 月 九 日

本证书仅对与认可文件和样品一致的产品有效。

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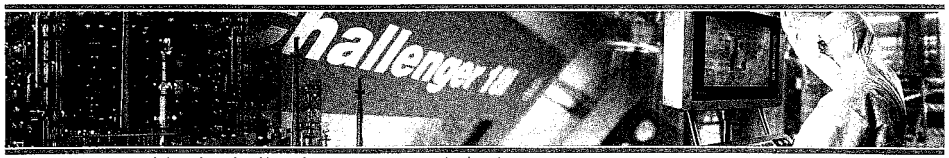
网址：www.nepsi.org.cn
Email:info@nepsi.org.cn
电话：0086 21 64368180
传真：0086 21 64844580



HMI & Remote PC Terminals for industrial and hazardous areas – Ex Zone 1 / 2 / 21 / 22

GECMA Components GmbH, Postfach 4146, D-50155 Kerpen

GECMA
A member of The MTL Instruments Group

Erklärung der EG – Konformität

/ Declaration of EC – Conformity / Attestation de Conformité CE

Wir / We / Nous GeCma Components GmbH
Heisenberstr. 26-40
50169 Kerpen, Germany

erklären in alleiniger Verantwortung, dass unser Produkt / declare under our sole responsibility that the product / attestons sous notre responsabilité que le produit,

auf welches sich diese Erklärung bezieht, den Bestimmungen der folgenden Richtlinien entspricht: / to which this declaration relates is in accordance with the provision of the following directives / se référant à cette attestation correspond aux dispositions des directives suivantes:

Productname	Product	Certificate	Standard
Challenger 15i-2-FMO #	Challenger 15i-2-FMO	DMT 00 ATEX E 089 X	EN 50014:1997+A1+A2, EN 50020:1994
Challenger 15i-FMO #	Challenger 15i-FMO	DMT 00 ATEX E 089 X	EN 50014:1997+A1+A2, EN 50020:1994
Challenger 18i-FMO #	Challenger 18i-FMO	DMT 00 ATEX E 089 X	EN 50014:1997+A1+A2, EN 50020:1994
Challenger KB #	Challenger KB	DMT 00 ATEX E 089 X	EN 50014:1997+A1+A2, EN 50020:1994
Challenger KMU #	Challenger KMU	DMT 00 ATEX E 089 X	EN 50014:1997+A1+A2, EN 50020:1994
Challenger M #	Challenger M	DMT 00 ATEX E 089 X	EN 50014:1997+A1+A2, EN 50020:1994
Challenger MTD #	Challenger MTD	DMT 00 ATEX E 089 X	EN 50014:1997+A1+A2, EN 50020:1994
Challenger TB #	Challenger TB	DMT 00 ATEX E 089 X, BVS 05 ATEX E 048	EN 50014:1997+A1+A2, EN 50020:1994
Challenger TCV 2i #	Challenger TCV 2i	DMT 00 ATEX E 089 X	EN 50014:1997+A1+A2, EN 50020:1994
Challenger CRi #	Challenger CRi	DMT 02 ATEX E 141	EN 50014:1997+A1+A2, EN 50020:1994
Challenger FPi #	Challenger FPi	TÜV 03 ATEX 2251	EN 50014:1997+A1+A2, EN 50020:2002
Challenger Ji #	Challenger JI	TÜV 04 ATEX 2459	EN 50014:1997+A1+A2, EN 50020:2002, EN 1127-1:1997, EN 50284:1999, EN 50281-1-1 :1998+A1 :2002
Challenger TPi #	Challenger TPi	TÜV 04 ATEX 2458	EN 50014:1997+A1+A2, EN 50020:2002, EN 1127-1:1997, EN 50284:1999, EN 50281-1-1 :1998+A1 :2002
Challenger Lite Ex 15/18-FHP #, 15i/18i Dust #	Challenger Lite Ex 15/18-FHP, 15i/18i Dust	BVS 03 E 254	EN 50281-1-1:1998+A1
Challenger PSU14i/*/*** #	Challenger PSU14i/*/***	DMT 00 ATEX E 090	EN 50014:1997+A1+A2, EN 50017:1998, EN 50019 :1994, EN 50020 :1994
Challenger PSU 150/** # and PSU150/*/*** #	Challenger PSU 150/** and PSU150/*/***	TÜV 03 ATEX 2032	EN 50014:1997+A1+A2, EN 50017:1998, EN 50019 :2000, EN 50020 :1994
Challenger Touch 15i-2-FMO # ; 18i-FMO #	Challenger Touch 15i-2-FMO ; 18i-FMO	TÜV 02 ATEX 1959	EN 50014:1997, EN 50020:1994
Challenger RS232***1i-* #	Challenger RS232***1i-*	DMT 03 ATEX E 032X	EN 50014:1997+A1-A2, EN 50020:1994
Challenger 15i-2-HB-FMO #	Challenger 15i-2-HB-FMO	BVS 05 ATEX E 020	EN 50014:1997+A1-A2, EN 50020:2002
Challenger Mi-PS2 und Mi-PS2-B #	Challenger Mi-PS2 und Mi-PS2-B	BVS 05 ATEX E 175	EN 50014:1997+A1-A2, EN 50020:2002, EN 50284 :1999
Challenger K**i-PS2 #	Challenger K**i-PS2	BVS 05 ATEX E 174 X, IBExU 06 ATEX 1043 X	EN 50014:1997+A1-A2, EN 50020:2002, EN 50284 :1999, prEN 61241-0 :2002, EN 61241-1 :2004
Explorer 15i/18i #	Explorer 15i/18i	IBExU 05 ATEX 1186 X	EN 60079-0:2004, EN 60079-7:2003, E IEC 60079-11:2004 (31G/132ACD), EN 60079-18:2004, prEN 61241-0:2002, EN 61241-1:2004
USB-Devices USB-** #	USB-Devices USB-**	IBExU 06 ATEX 1162 X	EN 60079-0:2004, IEC 60079-11:2006, prEN 61241-0:2002, EN 61241-1:2004
EFU -1-2-3, EFU-NEX #	EFU -1-2-3, EFU-NEX	TÜV 07 ATEX 7501 X	EN 60079-0:2006, prEN 60079-5:2006, EN 60079-7:2007, EN 60079-28:2007, EN 61241-0:2006, EN 61241-1:2004
ExB -DS-2-3 Data Storage Device #	ExB -DS-2-3 Data Storage Device	TÜV 08 ATEX 7570 X	EN 60079-0:2006, EN 60079-5:2007, EN 60079-7:2007, EN 61241-0:2006, EN 61241-1:2004
BCSi-1 * #	BCSi-1 *	TÜV 08 ATEX 7633	EN 60079-0:2006, EN 60079-11:2007, EN 60079-28:2007, EN 61241-0:2006, EN 61241-11:2006
ExMod-1-2-3 * #	ExMod-1-2-3 *	TÜV 08 ATEX 7639 X	EN 60079-0:2006, EN 60079-5:2007, EN 60079-7:2007, EN 60079-11:2007, EN 61241-0:2006, EN 61241-1:2004, EN 61241-11:2006

beschreibt beliebige Character, welche keinen Einfluss auf den Explosionsschutz bzw. das ATEX Zertifikat haben / # describe free signs which have no effect to the hazardous protection resp. the ATEX certificate / # Décrit un caractère libre qui ne change pas la méthode de production du produit ainsi que son certificat ATEX.

Das jeweilige Zertifikat ist Bestandteil der Konformitätsbescheinigung welcher weitere Details zu entnehmen sind / The respective certificate is a part of this declaration of conformance of which further details are to be refered / chaque certificat indiquée ci-dessus fait partie de cette pésente déclaration. Pour plus de détails, veuillez se référer au document de chaque certificat.

94/9/EG ATEX Richtlinie
89/336/EWG EG-EMV-Richtlinie
73/23/EWG Niederspannungsrichtlinie

GeCma Components GmbH
Dipl.-Ing. (FH) A. Jung
Entwicklung / Development

Cologne, 19.12.2008
Ort und Datum
Place and date
Lieu et date

Für Bestellungen und Verkäufe gelten ausschließlich unsere „Allgemeinen Zahlungs- und Geschäftsbedingungen".
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